

REMARKS

Claims 1-39 are pending in the application. Claims 1-39 stand rejected under 35 U.S.C. §§ 102(b), 103(a). Claims 1, 15, 22 and 32 were amended herein to more clearly recite the invention. No new matter has been added.

Claims 1-4, 15, 22 and 32 were rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 5,627,958 (Potts et al.). Claims 5-14, 16-21, 23-31 and 33-39 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Potts et al. in combination with U.S. Patent No. 5, 694,559 (Hobson et al.). The rejections to claims 1-39 under 35 U.S.C. §§ 102(b), 103(a) are respectfully traversed.

Initially, Applicants gratefully acknowledge the time and consideration that the Examiner gave to the present application by way of the teleconference of Monday, October 22, 2001, in which the Examiner indicated agreement that the provision of help information in a source code development environment is different than the provision of help for features of a generic application as taught by Potts et al. For instance, Potts et al. teaches the provision of help information about a toolbar.

In more detail, the present invention relates to a computing environment in which content, such as source code, is written or developed by a computer programmer via an editor, and an automatic help module is invoked upon the occurrence of a predetermined event. See e.g., page 4, lines 10-17. The present invention thus provides via a display or other means reference or help information relating to an identifier in the source code being written or developed. The identifier may be macro name, a function name, type name, or other programming construct, and the identifier may be an identifier earlier created or defined by the developer developing the source code or the identifier may come from another source for

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programming use, such as an application programming interface that provides externally developed programming functionality. For some exemplary scenarios enabled by the present invention, as the developer or user develops programming source code, the help module may help describe a variable "*i*" entered by the user as an *int* (integer), indicate that a function *funct* entered by the user has two parameters *param1* and *param2*, and/or additionally provide a description of the functions or use of *funct*, *param1* and/or *param2*.

In one embodiment, for instance, the reference information is a list of parameters for the function with the associated data type for each parameter. Because the help or reference information is displayed directly in response to the predetermined event in accordance with the present invention, the predetermined event begins the process of giving help or reference information including descriptions of the identifier, descriptions of the type(s) of identifier and/or descriptions of syntax associated with the identifier for further entry by the user.

By contrast, Potts et al. does not teach or suggest aiding a user of an editor to develop source code. With reference to Figs. 6A and 6B, in response to an event, Potts et al. teaches to bring up a display window or interface 600 having a description 605 relating to an "object of interest." The user then chooses one of a variety of options such as the rendering of multimedia object 603, the execution of a tutorial routine 607 or the request of help information 609. See e.g., Col. 20, line 45 to Col. 22, line 16. None of the embodiments taught or suggested by Potts et al., however, provide help information associated with an identifier of source code, currently being developed. To the contrary, Applicants understand Potts et al. merely to teach that help information may be displayed for an application with respect to an "object of interest," such as a toolbar 618, the buttons of the toolbar or other aspect of the **application** (not source code or other content) executing in GUI window 165. See Col. 20, line 65 to Col 21, line 1. If

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the user is not satisfied with the pre-canned description 605 associated with the object of interest, the user may further assent to additional help 609. Applicants respectfully submit, however, that the process of dynamically aiding a developer to develop source code or other content as recited in accordance with the invention patentably defines over displaying help information relating to an object of interest, such as a toolbar, of an application.

Thus Potts does not teach, nor render obvious either alone or in combination with other cited references, the limitations of the pending claims. For example, Claim 1 recites: "an automatic help module invoked upon a predetermined event and operative to display information associated with the identifier including at least one of a description of the identifier, a description of the type of identifier and a description of syntax associated with the identifier for further entry by the user." Other independent claims contain similar limitations. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b) is respectfully requested.

Hobson et al. was cited by the Examiner for teachings relating to various dependent claims. Without conceding the propriety of the rejection under 35 U.S.C. § 103(a), Hobson et al. also does not teach or suggest the process of dynamically aiding a developer to develop source code by providing help information relating to programming constructs as presently recited by the independent claims by way of the present amendments.

Consequently, none of the cited references, taken alone or in combination, teach or suggest at least the features of an editor to provide for developing source code for a computer program, *the source code including an identifier entered by a user when the user is entering source code* in the editor and an automatic help module invoked upon a predetermined event and operative to display information associated with the identifier *including at least one of a description of the identifier, a description of the type of identifier and a description of syntax*

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associated with the identifier for further entry by the user, (Claims 1 and 22) and developing at least a section of source code for a computer program, the source code including an identifier entered by a user when the user is entering the section of source code and searching for information on the identifier including at least one of a description of the identifier, a description of the type of identifier and a description of syntax associated with the identifier for further entry by the user in response to an event (Claims 15 and 32).

Claims 2 to 14, 16 to 21, 23 to 31 and 33 to 39 depend either directly or indirectly from claims 1, 15, 22 and 32, respectively, and are allowable for the same reasons. Applicants thus submit that Claims 1 to 39, as amended, patentably define over Potts et al. taken alone or in combination with the Hobson et al. reference. Withdrawal of the rejections of claims 1-39 under 35 U.S.C. § 102(e) and § 103(a) is thus earnestly solicited.

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CONCLUSION

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Office Action, and submit that Claims 1-39 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the Examiner's earliest convenience is earnestly solicited.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend claims 1, 15, 22 and 32, as follows:

1. (Twice Amended) A system comprising:

an editor to provide for developing source code for a computer program, said source code including an identifier entered by a user when the user is entering source code in the editor;

an automatic help module invoked upon a predetermined event and operative to display information associated with the identifier including at least one of a description of the identifier, a description of the type of identifier and a description of syntax associated with the identifier for further entry by the user, said information being displayed directly in response to said predetermined event without further action by the [a] user of the editor.

15. (Twice Amended) A method comprising:

developing at least a section of source code for a computer program, said source code including an identifier entered by a user when the user is entering said section of source code;

detecting an event;

searching for information on the identifier including at least one of a description of the identifier, a description of the type of identifier and a description of syntax associated with the identifier for further entry by the user in response to the event; and

displaying the information directly in response to said event without further action by the [a] user of the editor.

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22. (Twice Amended) A computer comprising:

a processor;

a computer-readable medium;

an editor to provide for developing source code for a computer program, said source code including an identifier entered by a user when the user is entering source code in the editor; and
an automatic help module invoked upon a predetermined event detected by the editor and operative to display reference information associated with the identifier including at least one of a description of the identifier, a description of the type of identifier and a description of syntax associated with the identifier for further entry by the user, said information being displayed directly in response to said predetermined event without further action by the [a] user of the editor.

32. (Twice Amended) A computer readable medium containing computer-executable instructions for performing a method comprising:

developing at least a section of source code for a computer program, said source code including an identifier entered by a user when the user is entering said section of source code;

detecting an event;

searching for information on the identifier including at least one of a description of the identifier, a description of the type of identifier and a description of syntax associated with the identifier for further entry by the user in response to the event; and

displaying the information directly in response to said event without further action by the [a] user of the editor.

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